



**A STANDARD OPERATING PROCEDURE
for**

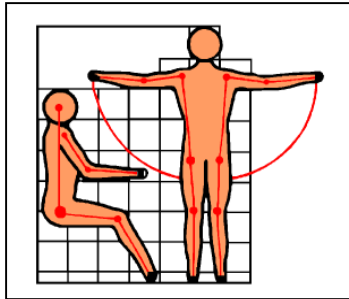
Ergonomics Program

June 2001

U.S. General Services Administration
Environmental Business Strategies Division
Washington, DC 20405

INTRODUCTION

This Standard Operating Procedure (SOP) has been developed to address Ergonomics in the work place, and to ensure that GSA employees are provided adequate protection from hazards that are reasonably likely to cause or contribute to work-related musculoskeletal disorders.



GSA feels that all employees should be sufficiently educated to avoid or minimize ergonomic hazards within their personal control, to report symptoms early enough to avoid serious medical complications and to understand the need to communicate to their supervisor regarding a work station, equipment or job duty that presents an ergonomic

hazard, then the supervisor should be in the best possible position to identify and rectify an inappropriate situation.

You may elect to develop your own regional SOP for an ergonomics program, or you may choose to use this SOP. If you decide to develop your own SOP, it must be at least as stringent as the requirements contained in this document.

OSHA standards may be obtained from the local OSHA Area Office or purchased from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

INDEX

	<u>Para.</u>	<u>Page</u>
INTRODUCTION		i
INDEX		ii
PURPOSE	1	1
SCOPE	2	1
DEFINITIONS	3	1
GENERAL INFORMATION	4	2
RESPONSIBILITIES	5	2
Supervisors	5a	2
Regional OSH Program Offices	5b	3
REPORTING MUSCULOSKELETAL DISORDERS	6	3
JOB HAZARD ANALYSIS	7	4
RISKS FACTORS	8	5
REMEDIAL ACTION	9	8
HAZARD REDUCTION AND CONTROL MEASURES	10	8
TRAINING	11	10
PROGRAM REVIEW	12	11
RECORDKEEPING	13	11

TABLES

TABLE 1. ERGONOMIC PROGRAM TIME FRAMES	4
TABLE 2. BASIC SCREENING TOOL	6

APPENDICES

APPENDIX A. JOB HAZARD ANALYSIS TOOLS	A-1
APPENDIX B. SUMMARY OF GSA'S ERGONOMICS PROGRAM	B-1

General Services Administration

ERGONOMICS PROGRAM

1. PURPOSE. This SOP establishes minimum performance standards for an ergonomics program. Its purpose is to reduce the number and severity of musculoskeletal disorders (MSDs) caused by exposure to risk factors in the workplace.

2. SCOPE. This SOP applies to all GSA activities and operations.

3. DEFINITIONS.

a. Ergonomics. The science of designing the job to fit the worker, rather than physically forcing the worker's body to fit the job. It involves the design, selection, and use of appropriate furniture, tools, equipment, and workplace characteristics. Applied correctly, ergonomics results in a comfortable fit between the work, the worker, and the workstation.

b. Establishment. A GSA establishment is considered to include all GSA operations and activities which are located at one geographic location.

c. Job. Means the physical work activities or tasks that an employee performs. Jobs are considered to be the same if they involve the same physical work activities or tasks, even if the jobs have different titles or classifications.

d. Musculoskeletal Disorders (MSDs). Disorders and injuries of the soft tissues (muscles, tendons, ligaments, joints, and cartilage) and nervous system. MSDs can affect nearly all tissues, including the nerves and tendon sheaths, and most frequently involve the arms and back. Examples of MSDs include carpal tunnel syndrome, tendinitis, tennis elbow, etc.

e. MSD Incident. The following cases constitute an MSD Incident:

(1) The MSD is work-related and requires days away from work, restricted work, or medical treatment beyond first aid; or

(2) The MSD signs or symptoms are work-related and last for at least 15 consecutive days after the employee reports them.

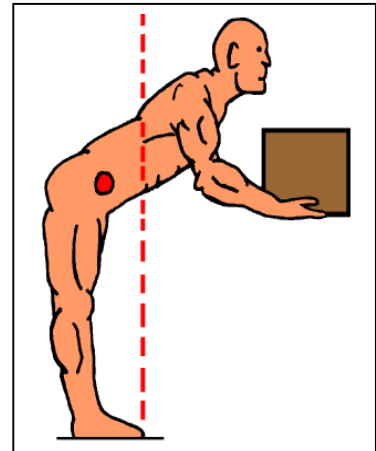
f. MSD Signs. Objective physical findings that an employee may be developing an MSD. Examples of MSD signs are:

- (1) Decreased range of motion,
- (2) Deformity,
- (3) Decreased grip strength, and
- (4) Loss of muscle function.

g. MSD Symptoms. Physical indications that an employee may be developing MSDs. MSD symptoms do **NOT** include discomfort, but do include:

- (1) Pain,
- (2) Numbness,
- (3) Tingling,
- (4) Burning,
- (5) Cramping, and
- (6) Stiffness.

h. Representative. A recognized or certified collective bargaining agent.



4. GENERAL INFORMATION.

a. About 1.8 million workers report MSDs each year. About 600,000 of those workers need to take time off work because of those injuries. In addition, another 1.8 million workers each year experience MSDs that they do not report. GSA's ergonomics program is developed to reduce the risk of disabling injuries associated with ergonomic risk factors within GSA's work force.

b. OSHA prohibits employers from discriminating against employees for reporting potential hazards in the workplace. GSA supports this prohibition and encourages prompt reporting.

5. RESPONSIBILITIES.

a. Supervisors. Upon becoming aware of MSD hazards, or of an employee experiencing an MSD or their signs or symptoms, supervisors should promptly contact the regional Occupational Safety and Health (OSH) Program office and request an ergonomic evaluation.

b. Regional OSH Program Offices.

(1) Upon receipt of information that an employee has experienced an MSD or their signs or symptoms, the regional OSH Program office should promptly determine if that report constitutes an MSD Incident.

(2) If a report constitutes an MSD Incident, determine within 15 calendar days if the employee's job/task involves the risk factors listed in [Table 2 - Basic Screening Tools](#).

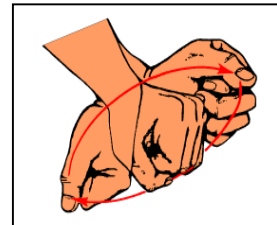
6. [REPORTING MSDs](#).

a. Supervisors becoming aware of MSDs, their potential hazards, signs and symptoms should promptly report them to the regional OSH Program office. Such reports are to be made in writing (e.g., memo, e:mail, etc.) to the regional OSH Program office.

b. Employees should report MSDs, their potential hazards, signs and symptoms directly to their supervisor. Reports may be made directly to the regional OSH Program office if the supervisor's response is not satisfactory to the employee. Such reports are to be made in writing (e.g., memo, e:mail, etc.).

c. The regional OSH Program office is responsible for investigating reports of MSDs, their hazards, signs and symptoms.

(1) Once a report is received by the regional OSH Program office, a determination should be made within 30 calendar days as to whether or not the report should be considered an MSD Incident. In attempting to establish if an MSD Incident exists, occupational health physicians may be utilized when determining if MSD signs and symptoms are work-related.



(2) If the report is determined an MSD Incident, a determination should be made within 30 calendar days as to whether or not the job meets the risks factors mentioned in [Table 2](#).

(3) If an employee's job meets the risks factors, the regional OSH Program office should complete the following steps for that job and all jobs in the establishment that are the same as that job:

(a) Within 20 calendar days of the determination that the job meets the risk factors, implement the Remedial Action procedures outlined in Paragraph 9, below, **or**

(b) Develop and maintain a comprehensive Ergonomics Program following the time frames listed in Table 1 below:

TIME SINCE JOB DETERMINED TO MEET RISK FACTORS	ACTION TO BE ACCOMPLISHED
Within 20 Calendar Days:	<ul style="list-style-type: none"> • Initiate evaluation and follow-up the MSD Incident.
Within 30 Calendar Days:	<ul style="list-style-type: none"> • Provide employees prompt responses to their reports of MSDs and their hazards, signs, & symptoms. • Involve affected employees in the development, implementation, and evaluation of the ergonomics program in their workplace.
Within 45 Calendar Days:	<ul style="list-style-type: none"> • Train employees involved in setting up and managing ergonomics program.
Within 60 Calendar Days:	<ul style="list-style-type: none"> • Initiate a Job Hazard Analysis.
Within 90 Calendar Days:	<ul style="list-style-type: none"> • Implement Initial Controls. • Train current affected employees, supervisors or team leaders.
Within 2 Years:	<ul style="list-style-type: none"> • Implement Permanent Controls.
Within 3 Years:	<ul style="list-style-type: none"> • Conduct Program Evaluation.

TABLE 1. ERGONOMIC PROGRAM TIME FRAMES

7. JOB HAZARD ANALYSIS.

a. To determine whether or not a job meets the Risk Factors, a Job Hazard Analysis should be conducted for that job. An analysis previously conducted as outlined below may be used to the extent it is still relevant.

b. The Job Hazard Analysis should include all employees in the establishment who perform the same job, or a sample of employees in that job who have the greatest exposure to the relevant risk factors.

c. The Job Hazard Analysis should include the following:

(1) Talk with affected employees and their representatives about the tasks those employees perform that may relate to MSDs; and

(2) Observe the employees performing the job to identify the risk factors in the job and to evaluate the magnitude, frequency, and duration of exposure to those risk factors.

d. One or more of the following methods or tools should be used to conduct the Job Hazard Analysis:

(1) One or more of the hazard identification tools listed in the following [Basic Screening Tool, \(Table 2\)](#);

(2) A job hazard analysis conducted by a professional trained in ergonomics; or

(3) Any other reasonable method that is appropriate to the job and is relevant to the risk factors being addressed (see [Appendix A](#) for additional tools which may be used).

e. If it is determined that there is an MSD hazard in the job, the job will be termed high risk.

f. If it is determined the MSD hazards pose a risk only to the employee who reported the MSD, job controls, training, and evaluation may be limited to that individual employee's job.

8. **RISK FACTORS**. A job meets the Risk Factors if:

a. An MSD incident has occurred in that job; and

b. The employee's job routinely involves one or more days a week of exposure to one or more relevant risk factors at the levels described in the Basic Screening Tool in [Table 2](#), below.

BASIC SCREENING TOOL					
		Body Part Associated with MSD Incident			
		NOTE: Only risk factors for those areas of the body affected by the MSD incident require review.			
Risk Factor	Job/Task Involved	Neck/ Shoulder	Hand/ Wrist/ Arm	Back/ Trunk/ Hip	Leg/ Knee/ Ankle
Repetition	Repeating the same motions every few seconds or repeating a cycle of motions involving the affected body part more than twice per minute for more than 2 consecutive hours in a workday.	✓	✓	✓	✓
		5			

	Using an input device, such as a keyboard and/or mouse, in a steady manner for more than 4 hours total in a workday.	✓	✓		
Force	Lifting more than 75 pounds at any one time; more than 55 pounds more than 10 times per day; or more than 25 pounds below the knees, above the shoulders, or at arms' length more than 25 times per day.	✓	✓	✓	✓
	Pushing/pulling with more than 20 pounds of initial force (e.g., equivalent to pushing a 65-pound box across a tile floor or pushing a shopping cart with five 40-pound bags of dog food) for more than 2 hours total per day.	✓	✓	✓	✓
	Pinching an unsupported object weighing 2 or more pounds per hand, or use of an equivalent pinching force (e.g., holding a small binder clip open) for more than 2 hours total per day.		✓		
	Gripping an unsupported object weighing 10 pounds or more per hand, or use of an equivalent gripping force (e.g., crushing the sides of an aluminum soda can with one hand), for more than 2 hours total per day.		✓		
Awkward Postures	Repeatedly raising or working with the hand(s) above the head or the elbow(s) above the shoulder(s) for more than 2 hours total per day.	✓	✓	✓	
	Kneeling or squatting for more than 2 hours total per day.			✓	✓
		6			

	Working with the back, neck, or wrists bend or twisted for more than 2 hours total per day.	✓	✓	✓	
Contact Stress	Using the hand or knee as a hammer more than 10 times per hour for more than 2 hours total per day.		✓		✓
Vibration	Using vibrating tools or equipment that typically have high vibration levels (such as chainsaws, jack hammers, percussive tools, riveting or chipping hammers, etc.) for more than 30 minutes total per day.	✓	✓	✓	
	Using tools or equipment that typically have moderate vibration levels (such as jigsaws, grinders, sanders, etc.) for more than 2 hours total per day.	✓	✓		

Table 2. Basic Screening Tool

9. REMEDIAL ACTION:

a. This action may be used if employees in a GSA establishment have experienced **no more than** one MSD incident in that job, and there have been **no more than** 2 MSD incidents in that establishment, within the preceding 18 months. If any GSA establishment experiences more than 2 MSD incidents, all requirements of this SOP should be implemented.

b. A Remedial Action involves all of the following:

(1) Talk with the employees in the job and their representatives about the tasks the employees perform that may relate to the MSD incident,

(2) Observe employees performing the job to identify which risk factors are likely to have caused the MSD incident,

(3) Ask the employee(s) performing the job and their representatives to recommend measures to reduce exposure to the MSD hazards identifies,

(4) Implement MSD hazard controls within 90 calendar days of determination that the job meets the Risk Factors,

(5) Review the job within 30 calendar days after the controls are implemented to determine whether MSD hazards have been reduced to the required levels, and

(6) Maintain the recordkeeping required by this SOP.

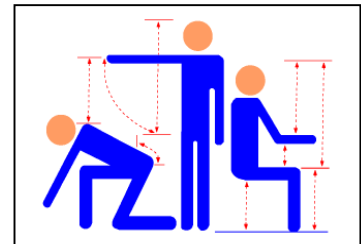
10. HAZARD REDUCTION AND CONTROL MEASURES.

a. If a job has been determined to have significant risk factors, one of the following actions should be taken:

(1) Control MSD hazards. For each high risk job, feasible engineering, work practice, or administrative controls, or any combination of them, should be used to reduce hazards in the job.

(a) Where feasible, engineering controls will be the preferred method of control.

(b) Where engineering controls are not feasible, personal protective equipment (PPE) may be used to supplement engineering, work practice, or administrative controls. However, PPE alone may **only** be used where other controls are not feasible.



(c) PPE, where used, will be provided at no cost to the employees.

(2) Reduce MSD hazards. The steps below to reduce MSD hazards should be followed:

(a) Ask employees and their representatives to recommend measures to reduce MSD hazards;

(b) Identify and implement initial controls within 90 calendar days after it has been determined that the job meets the Risk Factors. Initial controls are those which substantially reduce the exposures.

(c) Identify and implement permanent controls that significantly reduces or eliminates the MSD hazard.

(d) Track progress and ensure that controls are working as intended and have not created new MSD hazards. This includes consulting with employees in High Risk Jobs and their representatives.

(e) If the controls that are put in-place are not effective or have created new MSD hazards, additional appropriate control measures should be identified and implemented. Affected employees and their representatives will be included in the process, as well, as outlined above.

(3) If MSD hazards cannot be reduced or controlled as outlined above, the following process should be implemented:

(a) Reduce MSD hazards to the extent feasible;

(b) At least every 3 years, assess the job and determine whether there are additional feasible controls that would control or reduce MSD hazards; and

(c) If such controls exist, implement them until the MSD hazards have been reduced.

b. If a work-related MSD occurs in a job whose hazard(s) have been reduced to acceptable levels, the following requirements should be met:

(1) Ensure that appropriate controls are still in place, are functioning, and are being used properly, and

(2) Determine whether new MSD hazards exist and, if so, take steps (as outlined in this paragraph) to reduce or control the hazards.

c. [Appendix B](#) of this SOP contains a brief summary of these provisions.

11. [TRAINING](#).

a. Employees in a job that meets the Risk Factors, and their supervisors or team leaders, should be provided initial training within calendar 90 days after that employee's job meets the Risk Factors.

b. Those employees, supervisors, and team leaders covered above should receive follow-up training every 3 years.

c. This training should address the following topics, as appropriate:

(1) The requirements of the this SOP.

(2) The GSA Ergonomics Program and the employee's role in it;

(3) The signs and symptoms of MSDs and ways of reporting them;

(4) The risk factors and MSD hazards in the employee's job, as identified by the Basic Screening Tool in [Table 2](#) and the Job Hazard Analysis;

(5) The timetable for addressing the MSD hazards identified for the employees being trained;

(6) The controls used to address MSD hazards; and

(7) The employee's role in evaluating the effectiveness of controls.

12. [PROGRAM REVIEW](#).

a. At least every 3 years, each regional OSH Program office will evaluate their region's Ergonomics Program as follows:

(1) Consult with employees in the program, or a sample of those employees, and their representatives about the effectiveness of the program and any problems with the program;

(2) Review the elements of the program to ensure they are functioning effectively;

(3) Determine whether MSD hazards are being identified and addressed; and

(4) Determine whether the program is achieving positive results, as demonstrated by such indicators as reductions in the number and severity of MSDs, increases in the number of high risk jobs in which MSD hazards have been controlled, reductions in the number of jobs posing MSD hazards to employees, or any other measure that demonstrates program effectiveness.

b. Programs should be evaluated any time when a reason exists to believe the program is not functioning properly.

c. Program deficiencies should be promptly corrected.

13. [RECORDKEEPING](#). The following records should be maintained in either written or electronic means for at least 3 years, or until replaced by updated records, whichever comes first:

a. Employee or supervisor reports of MSDs, their signs, symptoms, and potential hazards and the regional OSH Program office response to such reports.

- b. Job hazard analyses.
- c. Hazard control measures implemented.
- d. Remedial Action processes undertaken.
- e. Ergonomics program evaluations completed.

APPENDIX A

JOB HAZARD ANALYSIS TOOLS

JOB HAZARD ANALYSIS TOOLS				
JOB HAZARD ANALYSIS TOOLS	SOURCE	RISK FACTORS EVALUATED	AREAS OF BODY ADDRESSED	EXAMPLES OF JOBS TOOL APPLIES TO
Job Strain Index	Ref. 1	<ul style="list-style-type: none"> • Repetition • Force • Awkward Positions 	<ul style="list-style-type: none"> • Hands • Wrists 	<ul style="list-style-type: none"> • Small parts assembly • Inspecting • Packaging • Data Processing • Jobs involving highly repetitive hand motions
Revised NIOSH Lifting Equation	Ref. 2	<ul style="list-style-type: none"> • Repetition • Force • Awkward postures 	<ul style="list-style-type: none"> • Lower back 	<ul style="list-style-type: none"> • Package sorting, handling • Assembly work • Manual handling involving lifting weights > 10 lbs. • Production jobs involving forceful exertions • Stationary lifting
Snook Push/Pull Hazard Tables	Ref. 3	<ul style="list-style-type: none"> • Repetition • Force • Awkward postures 	<ul style="list-style-type: none"> • Back • Trunk • Shoulders • Legs 	<ul style="list-style-type: none"> • Food service • Laundry • Housekeeping • Janitorial • Package delivery • EMT, ambulance • Garbage collection • Jobs involving pushing/pulling carts • Jobs involving carrying objects
Rapid Upper Limb Assessment (RULA)	Ref. 4	<ul style="list-style-type: none"> • Repetition • Force • Awkward postures 	<ul style="list-style-type: none"> • Wrists • Forearms • Elbows • Shoulders • Neck • Trunk 	<ul style="list-style-type: none"> • Assembly work • Production work • Janitorial • Maintenance • Telephone operator

JOB HAZARD ANALYSIS TOOLS (cont.)				
JOB HAZARD ANALYSIS TOOLS	SOURCE	RISK FACTORS EVALUATED	AREAS OF BODY ADDRESSED	EXAMPLES OF JOBS TOOL APPLIES TO
Rapid Entire Body Assessment (REBA)	Ref. 5	<ul style="list-style-type: none"> • Repetition • Force • Awkward postures 	<ul style="list-style-type: none"> • Wrists • Forearms • Elbows • Shoulders • Neck • Trunk • Back • Legs • Knees 	<ul style="list-style-type: none"> • Patient lifting, transfer • Housekeeping • Telephone operator • Housekeeping • Janitors • Grocery warehouse • Grocery cashier
ACGIH Hand/Arm (Segmental) Vibration TLV	Ref. 6	<ul style="list-style-type: none"> • Vibration 	<ul style="list-style-type: none"> • Hands • Arms • Shoulders 	<ul style="list-style-type: none"> • Grinding • Sanding • Chipping • Drilling • Sawing • Jigsawing • Chain sawing • Production work using vibrating or power hand tools • Regular use of vibrating hand tools
GM-UAW Risk Factor Checklist	Ref. 7	<ul style="list-style-type: none"> • Repetition • Force • Awkward postures • Contact stress • Vibration 	<ul style="list-style-type: none"> • Hands • Wrists • Forearms • Elbows • Shoulders • Neck • Trunk • Back • Legs • Knees 	<ul style="list-style-type: none"> • Assembly work • Production work • Small parts assembly

JOB HAZARD ANALYSIS TOOLS (cont.)				
JOB HAZARD ANALYSIS TOOLS	SOURCE	RISK FACTORS EVALUATED	AREAS OF BODY ADDRESSED	EXAMPLES OF JOBS TOOL APPLIES TO
Washington State Appendix B	Ref. 8	<ul style="list-style-type: none"> • Repetition • Force • Awkward postures • Contact stress • Vibration 	<ul style="list-style-type: none"> • Hands • Wrists • Forearms • Elbows • Shoulders • Neck • Trunk • Back • Legs • Knees 	<ul style="list-style-type: none"> • Assembly work • Production work • Keyboarding • Data processing • Small parts assembly • Maintenance • Package delivery • Package sorting • Food service • Regular use of vibrating hand tools

Sources Cited:

Ref. 1: "The Strain Index: A Proposed Method to Analyze Jobs for Risk of Distal Upper Extremity Disorders." Moore, J.S. and Garg, A. *AIHA Journal*, 1995, 56(5):443-458. You may obtain a copy from: American Industrial Hygiene Association, 2700 Prosperity Avenue, Suite 250, Fairfax, VA 22031; phone: 703-849-8888; web site: <http://www.aiha.org>. See also: <http://sg-www.satx.disa.mil/hSCOemo/tools/strain.htm> for a web-based version of this tool.

Ref. 2: *Applications Manual for the Revised NIOSH Lifting Equation*, Waters, T.R., Putz-Anderson, V., Garg, A., National Institute for Occupational Safety and Health, January 1994 (DHHS, NIOSH Publication No. 94-110). You may obtain a copy from: U.S. Department of Commerce, Technology Administration, National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161 (NTIS Publication No. PB94-176930); phone: 703-487-4650; web site: <http://www.cdc.gov/niosh>. See also: <http://www.industrialhygiene.com/calc/lift.html> for a web-based version of the tool.

Ref. 3: "The Design of Manual Handling Tasks: Revised Tables of Maximum Acceptable

- Weights and Forces," Snook, S.H. and Ciriello, V.M., *Ergonomics*, 1991, 34(9): 1197-1213. You may obtain a copy from: Taylor & Francis Inc., 325 Chestnut Street, Suite 800, Philadelphia, PA 19106; phone: 800-354-1420; web site: <http://www.tandf.co.uk/journals>.
- Ref. 4: "RULA: A Survey Method for the Investigation of Work-Related Upper Limb Disorders," McAtamney, L. and Corlett, E.N., *Applied Ergonomics*, 1993, 24(2): 91-99. You may obtain a copy from: Elsevier Science, Regional Sales Office, Customer Support Department, P.O. Box 945, New York, NY 10159; phone: 212-633-3730; web site: <http://www.elsevier.com>.
- Ref. 5: "Rapid Entire Body Assessment (REBA)," Hignett, S. and McAtamney, L., *Applied Ergonomics*, 2000, 31:201-205. You may obtain a copy from: Elsevier Science, Regional Sales Office, Customer Support Department, P.O. Box 945, New York, NY 10159; phone: 212-633-3730; web site: <http://www.elsevier.com>.
- Ref. 6: 1998 Threshold Limit Values for Physical Agents in the Work Environment, 1998 TLVs® and BEIs® Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices, pp. 109-131, American Conference of Governmental Industrial Hygienists. You may obtain a copy from: American Conference of Governmental Industrial Hygienists, Inc., 1330 Kemper Meadow Drive, Suite 600, Cincinnati, OH 45240; phone: 513-742-2020; web site: <http://www.acgih.org>.
- Ref. 7: UAW-GM Ergonomics Risk Factor Checklist RFC2," United Auto Workers-General Motors Center for Human Resources, Health and Safety Center, 1998. You may obtain a copy from: UAW-GM Center for Human Resources, Health and Safety Center, 1030 Doris Road, Auburn Hills, MI 48326.
- Ref. 8: WAC 296-62-05174, "Appendix B: Criteria for analyzing and reducing WMSD hazards for employers who choose the Specific Performance Approach," Washington State Department of Labor and Industries, May 2000. You may obtain a copy from: Washington Department of Labor and Industries, P.O. Box 44001, Olympia, WA 98504; phone: 360-902-4200; web site: <http://www.lni.wa.gov/wisha>.

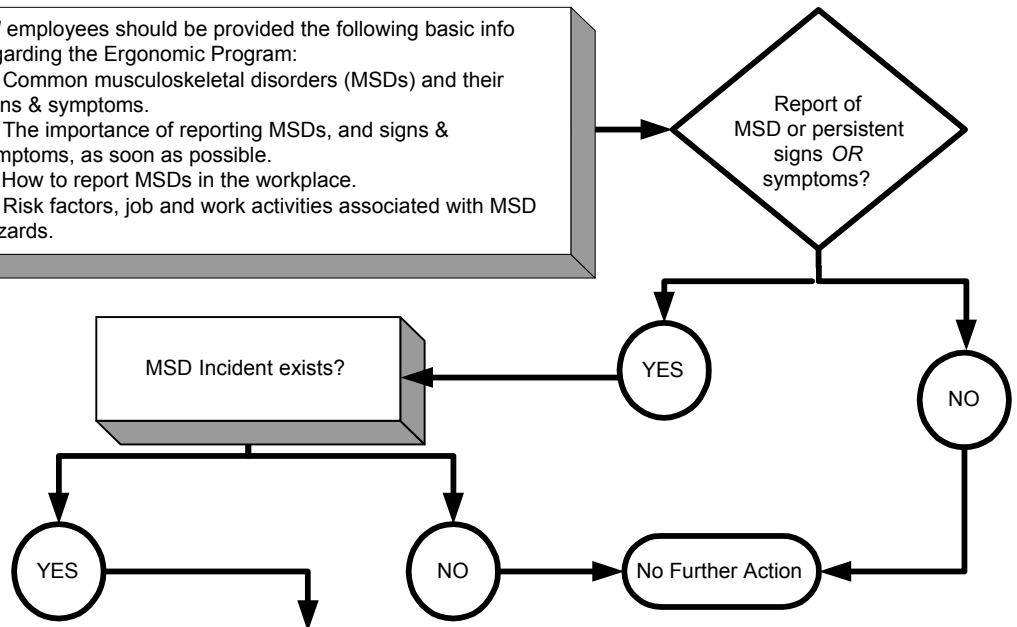
APPENDIX B

SUMMARY OF GSA'S ERGONOMICS PROGRAM

Summary of GSA's Ergonomics Program

All employees should be provided the following basic info regarding the Ergonomic Program:

- Common musculoskeletal disorders (MSDs) and their signs & symptoms.
- The importance of reporting MSDs, and signs & symptoms, as soon as possible.
- How to report MSDs in the workplace.
- Risk factors, job and work activities associated with MSD hazards.

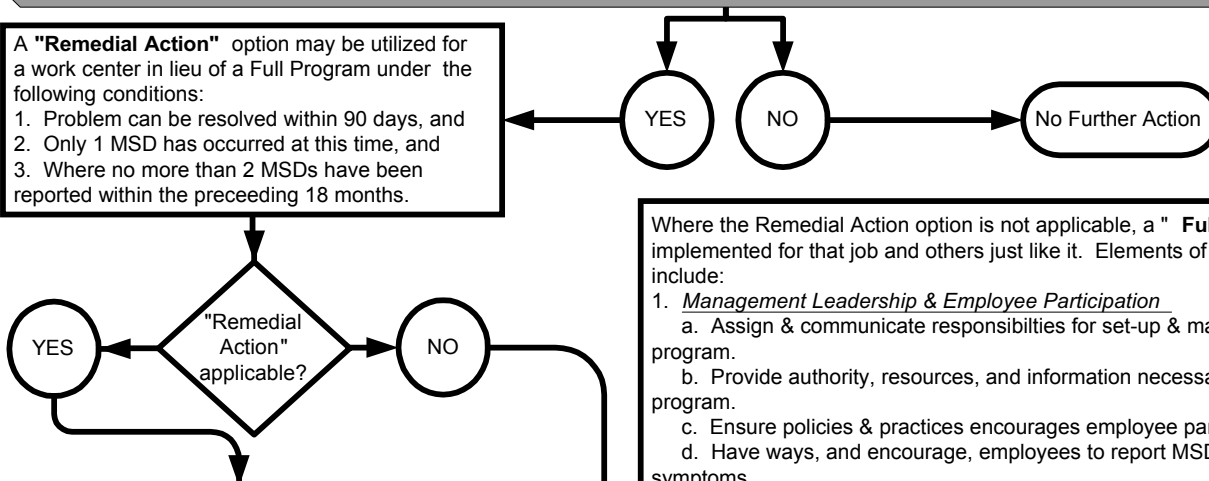


Does MSD Incident meet any of the following "Risk Factors ":

- Repetition -- e.g., repeat same motions every few seconds for 2 hours at a time, or using a device (such as a keyboard and/or mouse) in a steady manner for more than 4 hours total in a workday.
- Force -- e.g., lifting more than 75 pounds at any one time, or pushing/pulling with more than 20 pounds of initial force (such as pushing a 65-pound box across a tile floor for more than 2 hours total per day).
- Awkward Postures -- e.g., repeatedly raising or working with hands above the head for more than 2 hours per day, or working with the back, neck, or wrists bent for more than 2 hours total per day.
- Contact Stress -- e.g., using the hand or knee as a hammer more than 10 times an hour for more than 2 hours total per day.
- Vibration -- e.g., using tools or equipment that typically have high vibration levels (such as chainsaws, jack hammers, percussive tools) for more than 30 minutes per day or tools with moderate vibration levels (such as jig saws, grinders, etc.) for more than 2 hours per day.

A "Remedial Action" option may be utilized for a work center in lieu of a Full Program under the following conditions:

- Problem can be resolved within 90 days, and
- Only 1 MSD has occurred at this time, and
- Where no more than 2 MSDs have been reported within the preceding 18 months.



To use "Remedial Action," implement:

- Job Hazard Analysis (JHA) (as with Full Program)
 - Employee Involvement -- Talk with employees & representatives about tasks employee performs which may relate to MSD incident, observe employee performing job to identify risk factors, ask employee & representatives to recommend measures to reduce exposures to MSD hazards identified.
 - Hazard Control -- Within 90 days of determination that job meets Risk Factors, implement controls to control MSD hazards or reduce them to levels below that identified in JHA.
 - Recordkeeping (as with Full Program)
 - Review -- Within 30 days of implementation of controls, determine if MSD hazards have been reduced to level req'd by Job Hazard Analysis.
- If not, implement the "Full Program."**

Where the Remedial Action option is not applicable, a "Full Program" should be implemented for that job and others just like it. Elements of a "Full Program" include:

- Management Leadership & Employee Participation
 - Assign & communicate responsibilities for set-up & management of the program.
 - Provide authority, resources, and information necessary to implement program.
 - Ensure policies & practices encourages employee participation in program.
 - Have ways, and encourage, employees to report MSDs, their signs & symptoms.
 - Ensure employees are included in development, implementation, & evaluation of program.
- Job Hazard Analysis (JHA) and Control
 - Include all employees who perform same job where MSD exists.
 - Observe employees performing the job(s) under consideration.
 - Use 1 or more Hazard Identification Tools.
 - Fix problem jobs to control hazards or reduce them below levels outlined in the Hazard Identification Tools.
- Training
 - Provide initial training for employees, supervisors, & team leaders within 90 days of job meeting Risk Factors.
 - Provide initial training to each employee involved in setting up & managing program within 45 days of job meeting Risk Factors.
 - Provide follow-up training to each of the above every 3 years.
- Program Evaluation -- Evaluate program at least every 3 years, correct any deficiencies, involve employees in the evaluation.
- Recordkeeping -- Records should be kept (written or electronic) for 3 years or until replaced by updated records.